Physics 232: Computational Methods of Physics Syllabus

I.   Introduction

The objective of Physics 232 is to introduce physics majors to software and programming that will be of use to their future work in research and academics. There is no text book for the course, and all work for the course will be performed during the specified lab period from 2-5pm on Fridays. There will be no outside reading or homework required, and there will be no exams given.

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II.   Course Materials (to be Purchased by Jan. 27, 1996)

- Please note: there is no text book for this course
- Composition notebook
- Index cards (3x5) and index card holder
- Floppy disks: 3.5 inch, 1.44 MB, double-sided, double density

III. Grades

Grades will be based on several projects

- A log book of work done in class (to be described below)
- A set of note cards with commands you have learned written on them
- A mid-term project
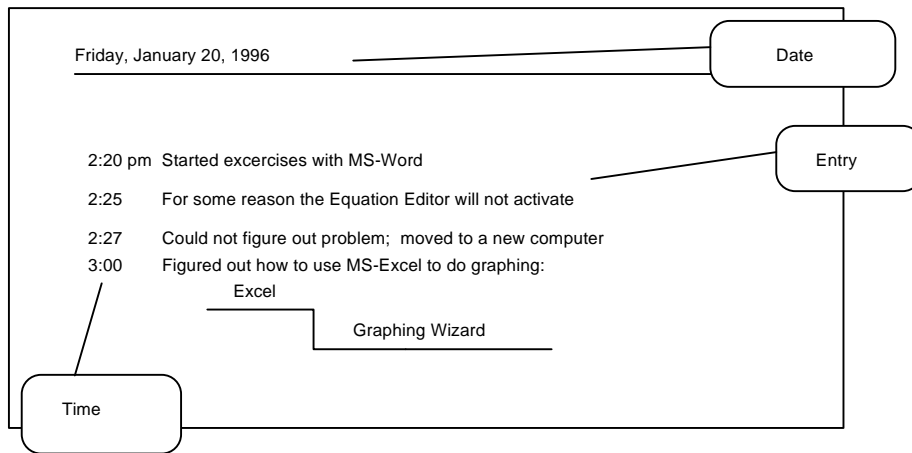- A final project
- In-class homework

Each of the above is worth 20% of your final grade. The grade scale will be A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = below 60%

IV.   Log Book

The log book has several functions:

- To focus your thinking about a problem
- To serve as a record of how your time is spent
- To act as a record of problems you faced and how you solved them.

In order to track your thinking on a problem, your log books should include the date and time, and should follow the format below:

Friday, January 20, 1996 — Date

2:20 pm Started excercises with MS-Word — Entry
2:25 For some reason the Equation Editor will not activate
2:27 Could not figure out problem; moved to a new computer
3:00 Figured out how to use MS-Excel to do graphing:
           Excel
                   Graphing Wizard

Time

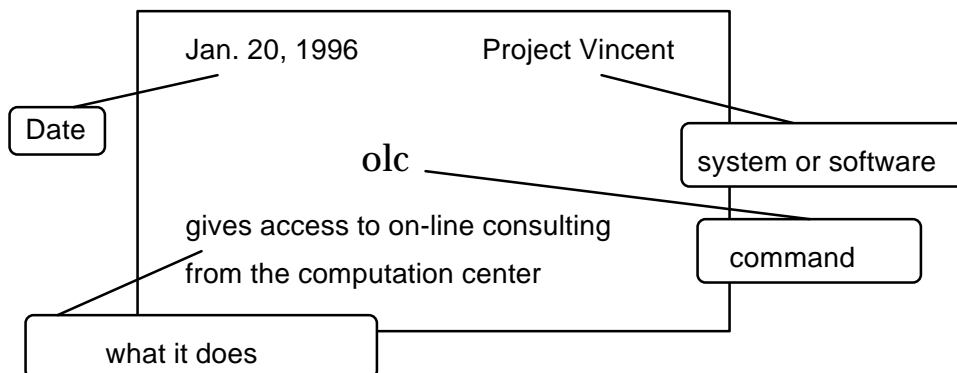The entries should include information on:
- anything new or interesting you have learned
- problems which occurred
- solutions you discovered
- questions that occurred to you

V.   Note Cards

Note cards should summarize new commands and techniques you have learned. The reasons for keeping note cards are:
- To serve as a quick reference for new commands
- To serve as flash cards for commands you want to memorize

You should place any new commands or procedures you learn on note cards for your future reference. Include the date, the system/software you are using, the command name, and a description of what the command does. Please use the following general format for recording information :

Jan. 20, 1996   Project Vincent

Date

olc   system or software

gives access to on-line consulting   command
from the computation center

what it does

VI.   Course Outline

Week #	Topic
1	Getting Started
2	Internet
3-4	MS-Excel
5-6	Maple
7	FORTRAN
8	Mid-term Project